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Metagagrella koyamai n. sp. (Opiliones, Gagrellidae)
from India

With 17 Text-figures

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ABSTRACT A new gagrellid, *Metagagrella koyamai* is described. It is of interest that a male secondary character is exhibited in the labrum.

Subord. PALPATORES
Superfam. PHALANGIOIDEA
Fam. Gagrellidae
Subfam. Gagrellinae
Group Gagrelleae

Metagagrella koyamai n. sp.

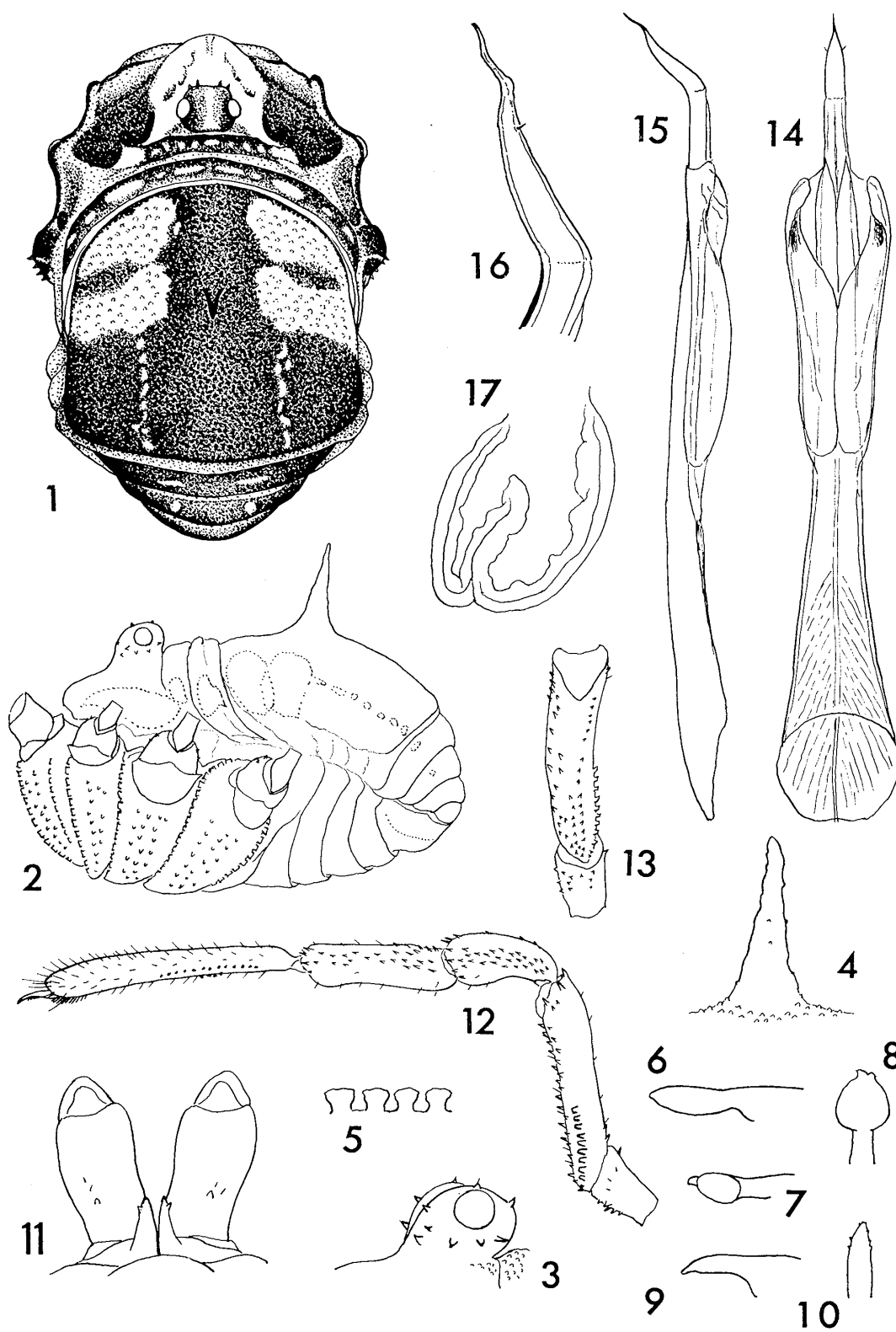
(Figs. 1–17)

Type-series. Male holotype and 3 male and 3 female paratypes from Masinagudi, Nilgiris, India, near Mudumalai Wild Life Sanctuary, 15–I–1979. Collected by N. Koyama. All the specimens used for this study are deposited in my collection.

Measurements (mm). Male (in parentheses female): Cephalothorax 1.2 (1.3) long, 2.4 (2.9) wide; abdomen 2.4 (2.7) long, 2.2 (2.8) wide. Total body length 3.6 (4.0). Length of femora I 8.6 (9.8), II 13.3 (15.5), III 8.1 (9.2), IV 11.2 (12.5). Total length of legs (from femur to tarsus) I 34.7 (41.0), II 61.9 (71.7), III 34.5 (37.5), IV 46.7 (54.5).

Male. Dorsum. From above of the form as seen in Fig. 1. Carapace,

Figs. 1–17. *Metagagrella koyamai* n. sp. — 1–2, Dorsal and lateral views of male; 3, left side view of eye tubercle, male; 4, scutal spine, female, left side view; 5, marginal humps on the anterior side of first coxa, male; 6–10, labrum, 6, 7, 9, lateral view, 6, 7, male, 9, female, 8, 10, ventral view, 8, male, 10, female; 11, dorsal view of suprache-
liceral lamellae and chelicerae; 12, male right palpus, inner side view; 13, ventral view of trochanter and femur of male right palpus; 14, ventral and 15, lateral view of penis; 16, lateral view of glans; 17, seminal receptacle. (Magnifications: 1–2, $\times 17$; 3–4, 12–13, $\times 30$; 5–11, $\times 50$; 14–15, $\times 55$; 16, $\times 130$; 17, $\times 230$.)



scutum and free tergites of abdomen thickly granular excepting median area in front of and on each side of eye tubercle, which is only weakly granular. Lateral margins of carapace armed along the curvature above the fourth coxae with some pointed teeth. Scutum with a long median spine only on the second area. Spine almost smooth but wrinkled (Fig. 4). Eye tubercle slants backward, in profile relatively low, much longer than high, rounded above, canaliculate, armaments as illustrated in Fig. 3.

Venter. Surface of all coxae and genital plate clothed with numerous coarse, pointed granules; free sternites with only short hairs, hairs usually arising on small tuberculations. A row of marginal humps present anteriorly on all coxae and posteriorly on first and fourth. Edge of humps straightly blunted (Fig. 5). Similar humps also on lateral margins of genital plate.

Labrum abruptly widened distally (Figs. 6–7), from below of the shape as shown in Fig. 8. This is considered a strong male secondary sexual character.

Supracheliceral lamellae protruded medially, elongated, tipped with one to four tubercles (Fig. 11).

Chelicerae normal, first segment armed with but few (usually one or two, rarely more) small pointed teeth (Fig. 11). Second unarmed except two or three very small teeth at distal inner part.

Palpi normal, all segments without apophyses. Armatures as in Figs. 12–13.

Legs slim and long. All segments cylindrical, first and third femora longer than body. Noduli formula: 0–2 or 3–0–0. Trochanters armed with a few small pointed teeth on both sides, femora toothed throughout, patellae and tibiae only poorly toothed.

Penis of the form shown in Figs. 14–16. Shaft widest at base, progressively narrower distally; ventral side of the basal opening deeply indented. Alated; alate part very long. Musculature developed in the proximal third of the shaft.

Color. Dorsum of body blackish brown to black with white markings (not secretion). Markings as shown in Fig. 1. Black parts usually with metallic luster. Median spine nearly black. Eye tubercle yellowish brown, with wide blackish eye rings, median furrow silvery white. Venter pale, somewhat greyish yellow to brown, coxae with white networks; genital plate with a brown median stripe, sides covered with white secretion. Free sternites largely silvery white with small pale brownish spots. Chelicerae and palpi uniformly light yellow. Trochanters of legs blackish brown, paler above with silvery white reticulations. Femora yellowish brown, caput dark brown, and so the remaining leg segments.

Female. Similar in general appearance to the male, but with a larger size. Labrum not widened distally, of a simple form as in Figs. 9–10. Tarsi of palpi without a ventral row of teeth. Seminal receptacles as shown in Fig. 17. Both ampullae well developed.

Variations. The collection contained seven individuals (4 ♂♂, 3 ♀♀). The noduli numbers in the second femora were as shown in Table 1. They were either

Table 1
Noduli numbers in the second femora in *Metagagrella koyamai*.

Sex	Noduli number	Sex	Noduli number
♂	2	♀	2L 3R
♂	— 2R	♀	2L —
♂	— 2R	♀	3L —
♂	3		

If the specimen was symmetrical, only one number was given.

—: Not examined.

two or three, and each appeared in the following ratio: 2 (60%), 3 (40%). This variation indicates that the generic separation in the Gagrellinae basing on the noduli numbers in femora alone (for example, *Metagagrella* Roewer, 1910 with two noduli, *Gagrellula* Roewer, 1910 with three, etc.) is not appropriate.

Remarks. The present species is most closely allied to *Metagagrella cingulata* Roewer, 1954 from the Nilgiris, India, but differs in being of smaller size. The marking of the dorsum of this species is also quite unique. Furthermore, in the coloration this species much resembles *Gagrellula albifrons* Roewer, 1931 from Sumatra. However, the armaments of the eye tubercle and of the first cheliceral segment differ greatly between the two species.

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